



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

AUG 28 2012

REPLY TO THE ATTENTION OF:
WC-15J

CERTIFIED MAIL 7001 0320 0006 0190 8285
RETURN RECEIPT REQUESTED

Mr. Tom Angelo, Director
Water Pollution Control Center
City of Warren
2323 Main Avenue Southwest
Warren, Ohio 44484

Subject: Compliance Sampling Inspection Report

Dear Mr. Angelo:

The enclosed inspection report documents the findings of a recent Compliance Sampling Inspection (CSI) for the City of Warren Water Pollution Control Center (WPCC) as conducted by the U.S. Environmental Protection Agency from September 12 to September 16, 2011.

The purpose of the CSI is to determine if the City of Warren WPCC was in compliance with its National Pollutant Discharge Elimination System permit, in particular the discharge effluent limitations. This was achieved through sampling the final treated effluent during the week of the inspection. In addition, self monitoring data was reviewed for compliance with permit limitations.

Enclosed is a copy of the report for your review. Thank you for the time and effort that you and your staff spent during the inspection. If you have any questions, please contact Mike Lukowich, P.E., at 312-353-4645 or Lukowich.Michael@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Barbara VanTil".

Barbara VanTil, Chief, Section 1
Water Enforcement and Compliance Assurance Branch

Enclosure

cc: Paul Novak (Ohio EPA) w/enclosure
Mike Lukowich (US EPA) w/ enclosure

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5**

Purpose: POTW Compliance Sampling Inspection

Facility: City of Warren
Water Pollution Control Center (WPCC)
2323 Main Avenue Southwest
Warren, Ohio 44481

Date(s) of Inspection:

September 12, 2011 to September 16, 2011

EPA Representatives:

Mike Lukowich, Environmental Engineer (Region 5)
Jenny Davison, Environmental Scientist (Region 5)
Jeremy Deyoe, Environmental Engineer (Region 5)
Keith Middleton, Environmental Engineer (Region 5)

Mark Moloney, Environmental Engineer (Region 5, Cleveland)
Cher Salley, Geologist (Region 5, Cleveland)

Facility Representative:

Tom Angelo, Director
City of Warren WPCC

Report Prepared by:

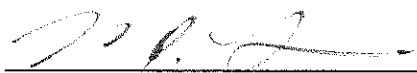
Mike Lukowich, Environmental Engineer

Report Date: July 1, 2011

Appendix A: EPA CWA Section 308 Information Request with Response from City of Warren

Appendix B: Clean Water Act Sampling Report – Warren WPCC

Appendix C: City Of Warren WPCC NPDES Permit

Inspector Signature:  **Date:** 8/20/2012

Background

The Warren WPCC is a Publically Owned Treatment Works (POTW) with a 16.0 Million Gallons per Day (MGD) design flow and the POTW was upgraded to advanced secondary treatment in February 1988. Treatment processes include grit removal, detritus setting tanks, extended aeration activated sludge, primary and final settling tanks, chlorination, and post aeration. The POTW has one point of discharge, labeled "Final Outfall - 001" that discharges into the main stem of the Mahoning River at river mile (RM) 35.25.

The Warren WPCC National Pollutant Discharge Elimination System (NPDES) permit was revised, effective December 1, 2010, to allow the POTW to accept brine waste water generated during oil and gas well drilling, development and production. The brine waste water must be discharged from a Centralized Waste Treatment (CWT) facility. The waste water discharged from a CWT to the Warren POTW has the following restrictions:

1. 100,000 gallons per day maximum
2. Maximum concentration of 50,000 mg/L Total Dissolved Solids (TDS)

The Warren POTW began accepting brine waste water from the Patriot CWT facility in January 2011.

Warren's WPCC NPDES permit was renewed by the Ohio EPA and became effective April 1, 2012. The new permit strictly prohibits the facility from accepting brine waste water generated from the oil and gas industry as it is outlined in the permit as:

"Disposal of brine wastewater from oil or gas drilling, exploration or production through a wastewater treatment plant and discharge to waters of the State is not an authorized method of disposal under R.C. 1509.22(C)(1) unless and until it is approved by the Chief of the Division of Oil and Gas Resources Management for testing or implementing a new technology or method of disposal. If such an approval is granted under R.C. 1509.22(C)(1) by the Chief of the Division of Oil and Gas Resources Management, the permittee must submit an NPDES Permit Modification application to Ohio EPA for approval prior to acceptance of brine waste water."

As of April 1, 2012 and, up to the date of this inspection report being generated, the Warren WPCC has ceased accepting brine waste water for treatment and disposal. The only known CWT that discharged waste water to the Warren WPCC generated from the oil and gas industry was the Patriot CWT facility.

Clean Water Act (CWA) Section 308 Information Request

Prior to the inspection, the City of Warren was issued a CWA Section 308 information request to assist the EPA in preparing for the inspection. A copy of that request along with the response is located in Appendix A. The response provides a summary of the treatment system with a Process Flow Diagram (PFD), confirms that the Warren WPCC is only accepting brine waste water generated from the oil and gas industry from one CWT facility (Patriot), and maintains that the POTW has not experienced any of the following conditions since accepting the brine waste water:

1. Diminished or inhibited performance of the biological treatment processes
2. Adverse impacts to the downstream water quality
3. Adverse impacts to the quality of the facility's biosolids

Site Inspection

A walk through of the facility was conducted on the morning of September 13, 2012. The operator and Tom Angelo conducted the walk through of the entire facility. The treatment units and processes were compared to the PFD that is contained in Appendix A. There were no significant discrepancies observed. All equipment appeared to be in good working order and well maintained.

Records Inspection

The following records for the past 3 years were made available and reviewed during the inspection:

- Sampling and analytical records
- Original recordings for any continuous monitoring instrumentation
- Instrumentation, calibration and maintenance records
- Discharge Monitoring Reports
- Industrial User Inventory
- Slug Load Control Plans for Significant Industrial Users
- Local Limits
- Sewer Use Ordinance
- Annual Pretreatment Reports
- Enforcement Response Plan

The facility also provided a copy of the NPDES permit renewal application that it submitted to Ohio EPA. All documents were current and in good order.

Inspection Closeout

An inspection closeout meeting with Mr. Tom Angelo was conducted on Friday September 16, 2011. Mr. Angelo was informed that EPA would provide a copy of the final inspection report which would include the results from the sampling conducted by EPA.

Compliance Sampling

EPA Sampling

The inspection included sampling of the influent and final effluent at the Warren WPCC. The sampling protocol, results and all documentation are contained in the sampling report, Appendix B

The EPA sample results from the plant effluent were compared to the final effluent limitations contained in Warren's NPDES permit effective at that time. All sampling indicated the discharge was in compliance with the NPDES permit limitations for Final Outfall - 001.

Warren WPCC Final Effluent Monitoring

The City of Warren is required to self monitor under their NPDES permit which was effective at that time and is contained in Appendix C. A review of the final effluent sampling data from December 2010 to August 2011 revealed two permit limitation exceedances, both for Total Suspended Solids (TSS), as seen in Table 1 below.

Date	Parameter	Discharge Limitation - Weekly Loading (kg/day)	Reported Value (kg/day)
3/1/2011	TSS	1817	2117
3/8/2011	TSS	1817	1848

Table 1 – Final Outfall - 001 Effluent Exceedances from December 2010 to August 2011.

APPENDIX A

EPA CWA Section 308 Information Request
with Response from City of Warren



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

AUG 16 2011

CERTIFIED MAIL 7001 0320 0006 0190 8360
RETURN RECEIPT REQUESTED

REPLY TO THE ATTENTION OF: WC-15J

Mr. Tom Angelo
Director - Water Pollution Control
City of Warren
2323 Main Avenue SW
Warren, Ohio 44484

Subject: City of Warren Water Pollution Control Center (WPCC)
NPDES Permit No. OH0027987, Information Request Pursuant to
33 U.S.C. § 1318 of the Clean Water Act, Docket No. V-W-11-308- 39

Dear Mr. Angelo:

Protecting water quality is a high priority of the U.S. Environmental Protection Agency. As authorized by the Clean Water Act (CWA or the "Act"), the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the United States (U.S.). As you know, the Ohio Environmental Protection Agency (OEPA) issued permit No. OH0027987 to the City of Warren, Ohio. The permit authorizes discharge of treated waste water to waters of the U.S., in accordance with effluent limitations, monitoring requirements, and other conditions set forth in the permit.

This request seeks information related to the operation, maintenance and monitoring of the WPCC referenced in the subject above. The information requested is in preparation for a sampling compliance inspection to be conducted the week of September 12, 2011. The information in Section A of the request shall be submitted within fourteen (14) days of receipt of the request. The records and documentation cited in Section B shall be made available for review onsite at the WPCC the week of September 12, 2011.

EPA is authorized under Section 308 of the CWA, 33 U.S.C. § 1318, to require reports and other information necessary to carry out the purpose of the Act. Accordingly, pursuant to Section 308 of the Act, you are directed to provide EPA with the information requested in the enclosure.

Please submit the information requested in the accompanying documents with a statement certifying that all representations contained therein are true and accurate to the best of your knowledge and belief using the certification language provided. Please exercise care to assure that responses are complete and accurate, because Section 309(c)(2) of the Act, 33 U.S.C. § 1319(c)(2), provides for the imposition of criminal penalties where false information is knowingly provided to EPA.

Please respond in writing with the information requested in the enclosure, within fourteen (14) days of receipt of this letter, where applicable, with copies to:

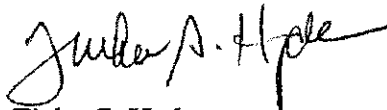
Water Enforcement and Compliance Branch
U.S. Environmental Protection Agency, Region 5
77 West Jackson Blvd. (WC-15J)
Chicago, IL 60604 -3590
Attention: Mike Lukowich, P.E.

OR

Lukowich.Michael@epa.gov

If you have any questions which come up during the completion of this information request, please feel free to contact Mike Lukowich, P.E. at 312-353-4645, or via email at Lukowich.Michael@epa.gov with your questions. Thank you for your timely response to this information request.

Sincerely,



Tinka G. Hyde
Director, Water Division

Enclosure

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5**

IN THE MATTER OF:)	Docket No. V-W-11-308- 39
)	
City of Warren, Ohio)	Proceeding under
Water Pollution Control Center)	section 308(a) of the
)	Clean Water Act (CWA), as
NPDES Permit No. OH0027987)	amended,
)	33 U.S.C. § 1318(a)

STATUTORY AUTHORITY

The following request is made pursuant to the authority vested in the Administrator of the U.S. Environmental Protection Agency by the above referenced statute and duly re-delegated to the undersigned Director of the Water Division, EPA Region 5. There can be significant civil or criminal penalties for failing to adequately respond to requests for information issued under the Clean Water Act (CWA) Section 308(a), 33 U.S.C. § 1318(a).

REQUEST FOR INFORMATION

- A. The following information shall be submitted to EPA Region 5 within fourteen (14) calendar days of receiving this request. The response may be submitted via standard mail or electronically.
1. Please submit a Process Flow Diagram (PFD) for the City of Warren Water Pollution Control Center (WPCC). The PFD shall depict the following:
 - Wastewater flow from influent to finally treated effluent including bypass;
 - All major treatment operations and processes (i.e., biological, physical, chemical);
 - All side streams and/or internal recycle systems;
 - All chemicals that may be added into the treatment system with the location of injection;
 - All sampling locations and with indications of the methods of sampling (i.e., grab, 24 hour flow proportioned composite, etc...);
 - All flow monitoring locations with a description of the flow meter;
 - All outfalls that may discharge treated or untreated waste water; and
 - Sludge treatment and disposal options.
 2. Has the Waste Water Treatment Plant (WWTP) experienced any bypasses/overflows as described in Part I.C, Section 1, Bypasses/Overflows, in the current National Pollutant Discharge Elimination System (NPDES) permit? If yes, please submit a copy of all documentation required by the NPDES permit.

3. Part I.C, Section 3, in the NPDES permit allows the facility to accept waste water generated from oil and well gas drilling. The waste water must originate from a Centralized Waste Treatment (CWT) facility.
 - a. Please provide a list of all CWTs that discharge oil and well gas drilling industrial waste water to the WWTP.
 - b. Has the WWTP experienced any of the conditions listed in condition 3 that has resulted in not being able to receive the oil and well gas drilling waste water, either permanently or temporarily, or was not able to accept the maximum volume of 100,000 gallons/day?
- B. The following information shall be available for review the entire week of September 12, 2011, at the City of Warren WPCC located at 2323 Main Avenue SW, Warren, Ohio.
1. All records for the past 3 years that are cited in the current NPDES permit under Part III Section 7, Records Retention.
 2. All records for the past 3 years that are listed in the current NPDES permit under Part II, Section CC, Condition 10, Record Keeping, as it pertains to the permittee's Pretreatment Program.
 3. All records for the past 3 years that are related to the permittee's Pretreatment Program such as:
 - Industrial User Inventory;
 - Slug Load Control Plans for Significant Industrial Users;
 - Local Limits;
 - Sewer Use Ordinance;
 - Annual Pretreatment Reports; and
 - Enforcement Response Plan.

Please submit your responses to Section A of this request within the designated time frame to:

Water Enforcement & Compliance Assurance Branch (WC-15J)
U.S. EPA Region 5
77 West Jackson Blvd.
Chicago, Illinois 60604-3590
Attention: Mike Lukowich, P.E., Environmental Engineer

Or

Lukowich.Michael@epa.gov

You may consider confidential the information that you submit to us. You may assert a claim of business confidentiality for any portion of the submitted information. Information subject to a

business confidentiality claim is available to the public only to the extent allowed under 40 C.F.R. Part 2, Subpart B. Under 40 C.F.R. § 122.7, the entitlement does not apply to information in permit application forms, and claims of confidentiality for the following will be denied: name and address of any permit applicant or permittee, permit applications, permits, and effluent data. Failure to assert a business confidentiality claim makes all submitted information available to the public without further notice.

In submitting the information required in this request, the City of Warren shall provide the following certification signed by either a principal executive officer or ranking elected official:

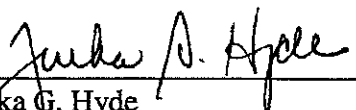
I certify under penalty of law that this response and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who manage the system, or those person(s) directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If at any time after submitting the requested information the signatory determines that any portion of such statement(s) certified as true is false or incorrect, the signatory must notify EPA. Knowingly providing false information, in response to this request, may be actionable under section 309(c)(4) of the Act, 33 U.S.C. § 1319, and 18 U.S.C. §§ 1001 and 1341.

EPA may use the information submitted in response to this request in an administrative, civil, or criminal action.

This request is not subject to the Paperwork Reduction Act, 44 U.S.C. § 3501 et seq., because it seeks collection of information from specific individuals or entities as part of an administrative action or investigation.

Please contact Mike Lukowich, P.E. of my staff at (312) 353-4645, or via email at Lukowich.Michael@epa.gov, if you have any questions about this request. Neither the issuance of this request by EPA nor compliance with this request by you, relieves you of liability for any penalty, fine, remedy, or sanction authorized to be imposed pursuant to sections 309(b), (c), (d), and/or (g) of the Act, 33 U.S.C. § 1319(b), (c), (d), and/or (g), including but not limited to any violations addressed by this request. EPA specifically reserves the right to seek any or all of the remedies specified in sections 309(b), (c), (d), and/or (g) of the Act, 33 U.S.C. § 1319(b), (c), (d), and/or (g).



Tinka G. Hyde
Director, Water Division

Date August 16, 2011

Attachment

AUTHORITY AND CONFIDENTIALITY PROVISIONS

Authority

Information requests are made under authority provided by Section 308 of the Clean Water Act, 33 U.S.C. 1318. Section 308 provides that: "Whenever required to carry out the objective of this Act, ...the Administrator shall require the owner or operator of any point sources to (i) establish and maintain such records, (ii) make such reports, (iii) install, use and maintain such monitoring equipment and methods (including where appropriate, biological monitoring methods), (iv) sample such effluent... and (v) provide such other information as he may reasonably require; and the Administrator or his authorized representative, upon presentation of his credentials, shall have a right of entry to...any premises in which an effluent source is located or in which any records...are located, and may at reasonable times have access to and copy any records...and sample any effluents..."

Please be advised that the submission of false statements is subject to federal prosecution under 18 U.S.C. §1001 and that this or any other failure to comply with the requirements of Section 308 as requested by U.S. EPA may result in enforcement action under the authority of Section 309 of the Clean Water Act, which provides for specified civil and/or criminal penalties.

Confidentiality

U.S. EPA regulations concerning confidentiality and treatment of business information are contained in 40 CFR Part 2, Subpart B. Information may not be withheld from the Administrator or his authorized representative because it is viewed as confidential. However, when requested to do so, the Administrator is required to consider information to be confidential and to treat it accordingly, if disclosure would divulge methods or processes entitled to protection as trade secrets (33 U.S.C. §1318(b) and 18 U.S.C. §1905), except that effluent data (as defined in 40 CFR §2.302(a)(2)) may not be considered by U.S. EPA as confidential.

The regulations provide that one may assert a business confidentiality claim covering part or all of any trade secret information furnished to U.S. EPA at the time such information is provided to the Agency. The manner of asserting such claims is specified in 40 CFR §2.203(b). In the event that a request is made for release of information covered by such claim of confidentiality or the Agency otherwise decides to make determination as to whether or not such information is entitled to such confidential treatment, notice will be provided to the claimant prior to any release of the information. However, if no claim of confidentiality is made when information is furnished to U.S. EPA, any information submitted to the Agency may be made available to the public without prior notice.

Note:

This information request is not subject to the approval requirements of the Paperwork Reduction Act of 1995, 44 U.S.C. § 3501 et seq.



Water Pollution Control Department

City of Warren, Ohio

Michael J. O'Brien
Mayor

2323 Main Ave., S.W., Warren, Ohio 44481-9603
Phone: (330) 841-2591 Fax: (330) 841-2717

William Douglas Franklin
Director of Service-Safety

RECEIVED

Thomas A. Angelo
Director

James Wilden
Superintendent

Greg Lubert
Sewer Systems
Superintendent

Thomas Petrilla
Maintenance Supervisor

James A. Black
Network Systems
Supervisor

Michael T. Welke
Biosolids Manager

Robert J. Stahl
Accounting Coordinator

Keith Folman
Industrial Pretreatment
Coordinator

Gary W. Shaffer, PE
Engineering Aid IV

August 29, 2011

SEP 07 2011

Mr. Michael Lukowich
U.S. EPA Region 5
77 West Jackson Blvd.
Chicago, Illinois 60604-3590

WATER ENFORCEMENT & COMPLIANCE
ASSURANCE BRANCH, EPA, REGION 5

Re: Compliance Inspection Information

Dear Mr. Lukowich:

Enclosed is a process flow diagram for the City of Warren Water Pollution Control Center. The following is a description of said diagram.

The flow enters at the head of the plant where a raw sampler is located. This sampler collects a 24 hour composite sample. Currently, we are repairing this sampler so it can collect a 24 hour flow proportional composite sample. Just before the flow enters the screening building, there is a septage receiving station. The Water Pollution Control Center only accepts residential septage at this station. A sample is collected at this station and the flow is monitored by a mag meter. The flow then enters the screening building where automatic bar screens remove debris from the flow. After the screen building there is a plant bypass pipe that has baffles to stop the flow from entering. The pipe was connected to the plants' old chlorine contact tank which has been backfilled and eliminated. The flow then enters the detritus tanks to remove grit before it enters the primary settling tanks. There is a settled sampler located after the primary tanks that collects a 24 hour composite sample. The flow then goes thru the plant flow meter, which is a sonic Doppler meter before it enters the aeration tanks. From the aeration tanks the flow enters the final clarifiers. The secondary sludge is drawn off of the bottom and sent to the return sludge well where a percentage is returned to the aeration tanks. A smaller percentage is wasted and sent to the dissolved air flotation tanks. The clean process water from the final clarifiers is dosed with chlorine between the months of May 1st to October 31st. The flow then enters the chlorine contact tanks before it is dosed with sodium bisulfate to remove unneeded chlorine. The flow then enters the post aeration tanks before it is discharged to the Mahoning River. Just before the flow is discharged to the receiving stream, a final sample is collected which is a 24 hour flow proportional composite sample. Any tank dewatering throughout the whole plant is sent to the front of the plant and monitored with a mag meter.



The secondary wasted sludge is mixed in the dissolved air flotation (d.a.f.) tanks with primary sludge that was automatically drawn from the primary settling tanks. At this time liquid emulsion polymer is added to help sludge thickening. The solids from the d.a.f. are then sent to a sludge holding tank. From the holding tank the solids are sent to a two meter belt press. Additional polymer is added to enhance thickening. The filtrate from the belt press is sent to the head of the plant. This flow is monitored by a mag meter. The cake is then sent through a lime stabilization/pasteurization process that makes a Class A biosolids product. The final biosolids product is then used by area farmers as a fertilizer.

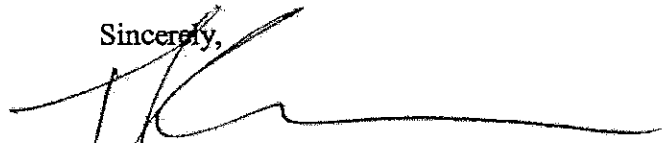
As per request #2, the Water Pollution Control Center has not experienced any bypass/overflow events in the current NPDES permit. The collection system has had 6 events. Enclosed is the documentation required by the NPDES permit.

As per request #3, The City of Warren, Ohio Water Pollution Control Center is accepting waste water generated from only one Centralized Waste Treatment Facility. The name of that facility is Patriot Water Treatment, LLC. The WWTP has not experienced any of the conditions listed in Part I,C section 3, page 17 of the NPDES permit.

I certify under penalty of law that this response and all other attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person(s) who manage the system, or those person(s) directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you have any questions regarding the above, please feel free to contact me at (330) 841-2591.

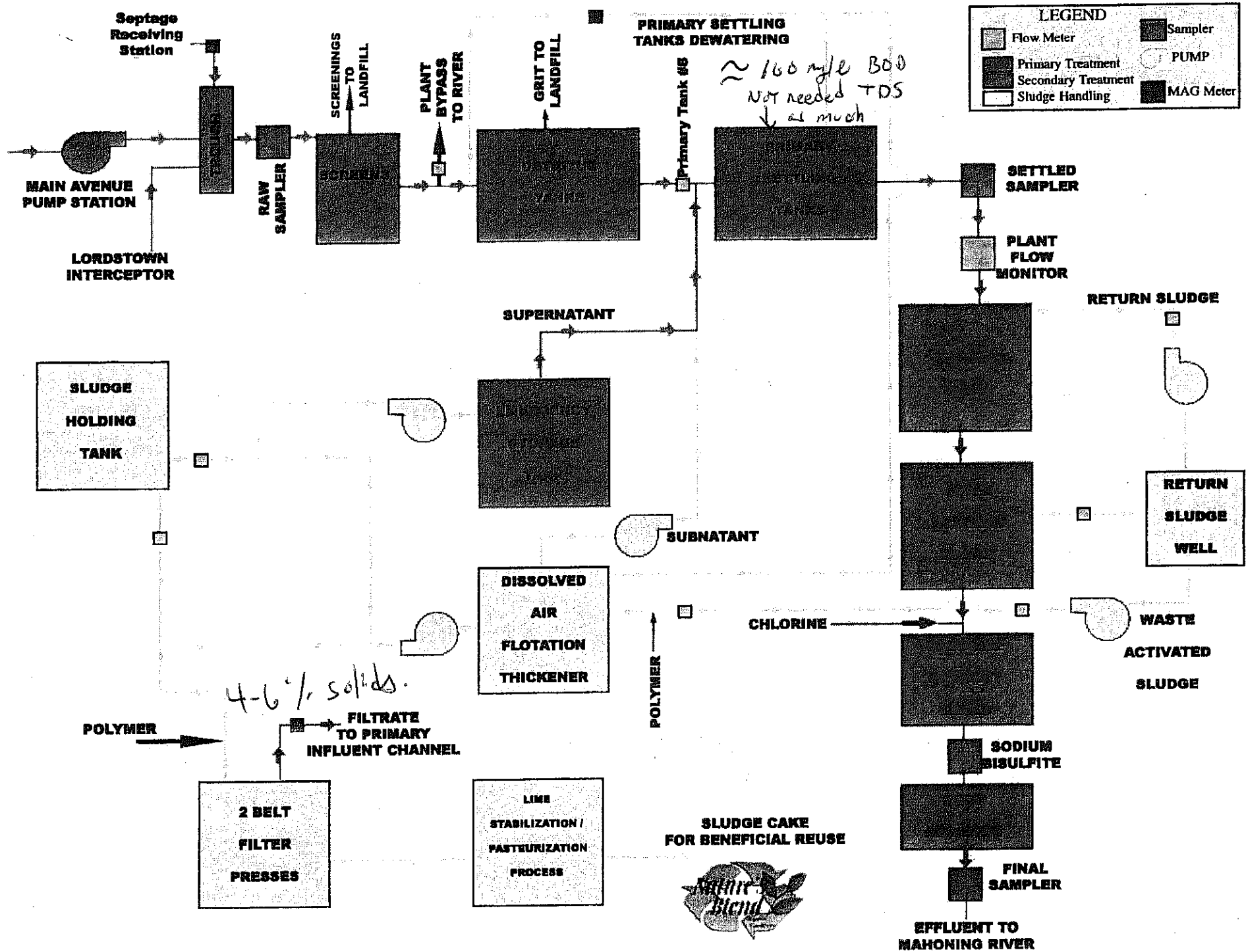
Sincerely,

A handwritten signature in black ink, appearing to read 'Thomas A. Angelo', with a long horizontal flourish extending to the right.

Thomas A. Angelo
Director

Water Pollution Control Center

14-16 MGD ADF



APPENDIX B

Clean Water Act Sampling Report – Warren WPCC



UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
CLEVELAND OFFICE
25089 CENTER RIDGE ROAD
WESTLAKE, OH 44145-4170

June 6, 2012

MEMORANDUM

SUBJECT: Clean Water Act Sampling Report – Warren Water Pollution Control Center,
Warren, Ohio

FROM: Mark Moloney, Environmental Engineer *MM*

THRU: Mark Conti, Technical Coordinator *MEC*
Office of Enforcement and Compliance Assurance, (ME-W)

TO: Michael Lukowich, Environmental Engineer,
Water Enforcement and Compliance Assurance Branch, (WC-15J)

Enclosed is a copy of the Clean Water Act sampling report for the sampling performed at the Warren Water Pollution Control Center on September 12-15, 2011. A separate report for the sampling performed at the Patriot Water Treatment facility is simultaneously being forwarded to Jenny Davison, WC-15J. A table summarizing the range of sampling results obtained at both facilities is also attached.

If you have any questions regarding this sampling report, please contact me at 440-250-1709.

Data Summary – Range of Results for U.S. EPA Sampling at Patriot Water Treatment and Warren POTW

June 12-15, 2011

(Results in mg/l unless otherwise indicated)

Parameter	Patriot Water Treatment		Patriot IU Discharge Limits	Warren POTW	
	Influent	Effluent		Influent	Effluent
Flow (MGD)	---	0.097971 – 0.099985		---	14.1 – 16.3
Total Suspended Solids	278 - 572	213 – 1,030	250*	100 - 168	ND
Total Dissolved Solids	27,100 - 46,900	20,100 – 32,400	1500*	716 - 728	656 - 806
Ammonia-N	**	**	35.0	**	**
Chemical Oxygen Demand	3,480 – 6,010	3,460 – 4,420	600*	201 - 281	39 - 56
Total Cyanide	ND ***	ND ***	0.335 (free cyanide)	ND – 0.150***	0.076 – 0.097***
T. Antimony	ND	ND	0.329	ND	ND
T. Arsenic	ND	ND	0.200	ND	ND
T. Chromium	0.0142 – 0.0366	0.0236 – 0.0433	1.5	ND	ND
T. Copper	0.0285 – 0.0483	0.0201 – 0.0497***	0.830	0.0176 – 0.0230	ND
T. Molybdenum	ND	ND	0.699	ND – 0.0134	ND
T. Mercury	ND	ND	0.0035	ND	ND
T. Nickel	ND	ND	1.80	ND – 0.00908	ND
T. Selenium	ND	ND	1.470	ND	ND
T. Zinc	ND	ND	0.497	0.0587 – 0.0662	ND – 0.0325***
Phenol	0.0179 – 0.0361***	ND – 0.0205***	3.65	ND	ND***
2-Methylphenol	ND – 0.00802***	ND – 0.0102***	1.92	ND	ND***
2,4,6-Trichlorophenol	ND	ND	0.155	ND	ND***
Acetone	ND – 4.470	ND – 3.260	30.2	0.0995 – 0.338	ND
2-Butanone	ND	ND	4.81	ND	ND

ND – Not Detected

*Concentrations exceeding these limits are surchargeable by the City of Warren

**Results not usable due to quality problems

*** Some or all data qualified by laboratory (see data sheets in sampling report)

